AMENDMENTS TO THE CLAIMS

Applicant submits below a complete listing of the current claims, including marked-up claims with insertions indicated by underlining and deletions indicated by strikeouts and/or double bracketing. This listing of claims replaces all prior versions, and listings, of claims in the application:

Listing of the Claims

1. (Previously presented) A method for transmitting digital messages through output terminals of a monitoring circuit integrated with a microprocessor, said messages being representative of determined events occurring on execution of instructions by the microprocessor, comprising:

after or before transmission of at least one specific digital message associated with a specific event, transmitting a correlation message comprising an identifier of said specific digital message and a counter of a number of instructions executed by the microprocessor between an instruction associated with the transmission of said specific message and an instruction associated with transmission of a selected previous digital message.

2. (Previously presented) The method of claim 1, in which the selected previous digital message is a digital message immediately preceding the specific digital message.

3. (Original) The method of claim 1, in which the correlation message comprises a correlation message identifier.

4. (Original) The method of claim 1, in which the specific digital message is representative of a data read or write instruction.

5. (Previously presented) The method of claim 1, in which the specific digital message is representative of an event independent from the execution of an instruction by the microprocessor.

6. (Previously presented) The method of claim 1, in which the transmitted digital messages are received by an analysis tool that associates, based on correlation messages, an instruction executed by the microprocessor with each transmitted digital message.

7. (Previously presented) A device for transmitting digital messages through output terminals of a monitoring circuit integrated with a microprocessor, said digital messages being representative of determined events occurring on execution of instructions by the microprocessor, comprising:

means for detecting whether a digital message to be transmitted by the monitoring circuit is of a specific type; and

means for transmitting, after or before transmission of a digital message of said specific type, a correlation message, said correlation message comprising an identifier of said specific digital message and a counter of a number of instructions executed by the microprocessor between an instruction associated with the transmission of the specific digital message and an instruction associated with transmission of a selected previous digital message.

8. (Previously presented) A system comprising:

a microprocessor, for transmitting digital messages representative of events occurring on execution of instructions by the microprocessor; and

means for transmitting, after or before transmission of at least one digital message associated with an event, a correlation message comprising at least an identifier of the digital message and a counter comprising a number of instructions executed by the microprocessor between an instruction associated with the transmission of the digital message and an instruction associated with transmission of a previous digital message.

9. (Previously presented) The system of claim 8, wherein the previous digital message immediately precedes the digital message.

10. (Previously presented) The system of claim 8, wherein the correlation message further comprises a correlation message identifier.

11. (Previously presented) The system of claim 8, wherein the digital message is representative of a data read or write instruction.

12. (Previously presented) The system of claim 11, wherein the digital message is representative of an event independent from execution of instructions by the microprocessor.

13. (Previously presented) The system of claim 8, wherein in which the transmitted digital messages are received by an analysis tool that associates, based on correlation messages, an instruction executed by the microprocessor with a transmitted digital message.

14. (Previously presented) The system of claim 8 further comprising means for detecting a type of the digital message.

15. (New) A method for transmitting digital messages through output terminals of a monitoring circuit integrated with a microprocessor, said messages being representative of determined events occurring on execution of instructions by the microprocessor, comprising:

after or before transmission of at least one specific digital message associated with a specific event, transmitting a correlation message comprising an identifier of said specific digital message and a counter of a number of instructions executed by the microprocessor between an instruction associated with the transmission of said specific message and an instruction associated with transmission of a selected previous digital message, wherein the transmitted digital messages are received by an analysis tool that associates, based on correlation messages, an instruction executed by the microprocessor with each transmitted digital message.

16. (New) The method of claim 15, in which the selected previous digital message is a digital message immediately preceding the specific digital message.

17. (New) The method of claim 15, in which the correlation message comprises a correlation message identifier.

18. (New) The method of claim 15, in which the specific digital message is representative of a data read or write instruction.

19. (New) The method of claim 15, in which the specific digital message is representative of an event independent from the execution of an instruction by the microprocessor.

20. (New) The system comprising:

a microprocessor, for transmitting digital messages representative of events occurring on execution of instructions by the microprocessor; and

means for transmitting, after or before transmission of at least one digital message associated with an event, a correlation message comprising at least an identifier of the digital message and a counter comprising a number of instructions executed by the microprocessor between an instruction associated with the transmission of the digital message and an instruction associated with transmission of a previous digital message, wherein the transmitted digital messages are received by an analysis tool that associates, based on correlation messages, an instruction executed by the microprocessor with a transmitted digital message.

21. (New) The system of claim 20, wherein the previous digital message immediately precedes the digital message.

22. (New) The system of claim 20, wherein the correlation message further comprises a correlation message identifier.

23. (New) The system of claim 20, wherein the digital message is representative of a data read or write instruction.

24. (New) The system of claim 23, wherein the digital message is representative of an event independent from execution of instructions by the microprocessor.

25. (New) The system of claim 20 further comprising means for detecting a type of the digital message.

26. (New) The device of claim 7, wherein the previous digital message immediately precedes the digital message.

27. (New) The device of claim 7, wherein the correlation message further comprises a correlation message identifier.

28. (New) The device of claim 7, wherein the digital message is representative of a data read or write instruction.

29. (New) The device of claim 28, wherein the digital message is representative of an event independent from execution of instructions by the microprocessor.

30. (New) The device of claim 7, wherein the transmitted digital messages are received by an analysis tool that associates, based on correlation messages, an instruction executed by the microprocessor with a transmitted digital message.

31. (New) The device of claim 7 further comprising means for detecting a type of the digital message.